

# PATENT COOPERATION TREATY

# PCT

10/598448

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference PCT49-06-001	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/EP2005/002303	International filing date (day/month/year) 04 March 2005 (04.03.2005)	Priority date (day/month/year) 08 March 2004 (08.03.2004)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant UGS CORP.			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
2. This REPORT consists of a total of 7 sheets, including this cover sheet.  
  
In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:
 

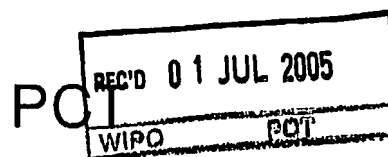
<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input checked="" type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input checked="" type="checkbox"/> Box No. IV	Lack of unity of invention
<input type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 338 82 70	Date of issuance of this report 13 September 2006 (13.09.2006)
	Authorized officer  Ellen Moyse  e-mail: pt05@wipo.int

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY



To:

see form PCT/ISA/220

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/EP2005/002303

International filing date (day/month/year)  
04.03.2005

Priority date (day/month/year)  
08.03.2004

International Patent Classification (IPC) or both national classification and IPC  
G06K9/46

Applicant  
SD&M SOFTWARE DESIGN & MANAGEMENT AG

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☐ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for International preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA:



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Authorized Officer

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Telephone No. +49 89 2399-7459



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/EP2005/002303

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/EP2005/002303

**Box No. III Non-establishment of opinion with regard to novelty, inventive step and Industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 1-17

because:

- ☒ the said international application, or the said claims Nos. 1-17 relate to the following subject matter which does not require an international preliminary examination (*specify*):

**see separate sheet**

- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the whole application or for said claims Nos.
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
  - the written form ☐ has not been furnished
  - ☐ does not comply with the standard
  - the computer readable form ☐ has not been furnished
  - ☐ does not comply with the standard
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
- ☒ See separate sheet for further details

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
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**Box No. IV Lack of unity of invention**

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1. ☐ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
  - ☐ paid additional fees.
  - ☐ paid additional fees under protest.
  - ☐ not paid additional fees.
  
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
  
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
  - ☐ complied with
  - ☒ not complied with for the following reasons:  
**see separate sheet**
  
4. Consequently, this report has been established in respect of the following parts of the international application:
  - ☒ all parts.
  - ☐ the parts relating to claims Nos.

**Re Item III**

**Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

- 1 The subject matter of present claims 1-15 fails to imply any technical embedding and thus relates to excluded subject matter. In particular, the claims can presently be read on purely mathematical methods, e.g. a method of partitioning for improving numerical integration over of k-dimensional "objects" (claims 1-13) or statistical classifications (claims 1-15).

Moreover, also any such computations in business related areas (cf. "marketing" etc. in pg. 1 line 14 of the description) would form excluded subject matter.

The subject matter of claims 16-17 contains features having a technical character ("processor") but still failing to provide any inventive technical contribution over the prior art in view of the objections raised w.r.t. claims 1-15.

No further preliminary opinion can thus be given at this stage.

**Re Item IV**

**Lack of unity of invention**

- 2 Reference is made to the following document:

D1: KRIEGEL H P, KRÖGER P, MASHAEL Z, PFEIFLE M, PÖTKE M, SEIDL T: "Effective Similarity Search on Voxellized CAD Objects" PROCEEDINGS EIGHTH INTERNATIONAL CONFERENCE ON DATABASE SYSTEMS FOR ADVANCED APPLICATIONS, DASFAA 2003, IEEE, 26 March 2003 (2003-03-26), - 28 March 2003 (2003-03-28) pages 27-36, XP002291589

- 3 The application lacks unity since the following two groups of inventions are not linked by a common inventive concept:

**Group 1:** claims: 1-4,6-17:

**"redundant partitioning"** (see pp. 2-3) including overlaps between cells.

**Group 2:** claims: 5-17:

**"proportional partitioning"** (see pg. 3) with approximately equal "regions" as defined by boundaries of the cells.

- 4 The application lacks unity: claims 1 and 5 have common pre-ambles, the features and concepts of which are known as indicated, for example, by document D1 and actually also already from the discussion of prior art by the applicant (cf. e.g. Fig. 2). The remaining subject matter relates to the use of a redundant partitioning (claim 1) and a proportional partitioning scheme (claim 5):

These two partitioning schemes do not share any further features or concepts. The redundant scheme involves overlapping cells while this is not needed for the proportional scheme. The proportional scheme involves approximately equal "regions" which has nothing to do with overlapping cells. Hence the subject matter of the two groups cannot be linked by a common inventive concept.